



Air Conditioning, Heating and Refrigeration Department
Refrigeration Systems
AHR-115
2023FA

Disability Services

Alamance Community College is committed to providing equal educational opportunities for students with documented disabilities. Students who require disability services or reasonable accommodations must identify themselves as having a disability and provide current diagnostic documentation to the Disability Services Office located in the Main Building, Room 233. All information is confidential. Please contact Disability Services Coordinator, Tianna Holloway, for more information at 336-506-4130 or email at disabilityservices@alamancecc.edu.

Contact Information

Instructor: Bently Pagura
Office: T141
Phone: 336-516-4191
Email: bcpagura199@alamancecc.edu

Best Ways to Contact Me

Department Head

William Crabtree

Department Head

William Crabtree

Office: T176

Phone: 336-506-4240

Email: wicrabtree231@alamancecc.edu

Course Description

This course introduces refrigeration systems and applications. Topics include defrost methods, safety and operational control, refrigerant piping, refrigerant recovery and charging, and leak testing. Upon completion, students should be able to assist in installing and testing refrigeration systems and perform simple repairs.

Course Competencies

By the end of this course student will be able to:

- Competency: Upon completion, student should be able to assist in installing and testing refrigeration systems and perform simple repairs. The lab portion of this course will be the designing and building of a refrigerator and freezer.

Course Credit

Class: 1.00

Lab: 3.00

Clinical: 0.00

Work: 0.00

Credit: 2.00

Prerequisites

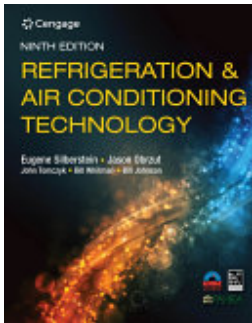
Take AHR-110

Skills Development

Soft Skills

Hard Skills Use tools and equipment to demonstrate safe techniques when servicing and testing HVAC/R systems.

Required Reading



Title: Refrigeration and Air Conditioning Technology

ISBN: 9780357435267

Authors: Eugene Silberstein, Jason Obrzut, John Tomczyk, Bill Whitman, Bill Johnson

Publisher: Cengage Learning

Publication Date: 2020-01-01

Course Grading and Requirements

Homework 10%

Test 30%

Lab 30%

Attendance 10%

Simulations 10%

Exam 10%

Grade

100-90 A

89-80 B

79-70 C

69-60 D

59-0 F

Students who have a 90% or higher by last week of class are exempt from the Final exam.

Student Success

We want you to succeed in this course and ACC provides a variety of free resources including the Tutoring Center, the Writing Center, and the Math Center. The Tutoring Center provides free tutoring and an open computer lab where you can complete your coursework. The Writing Center offers individual sessions with a writing consultant who will help students work on the development, organization, grammar, and mechanics of their assignments. The Math Center provides a walk-in environment with experienced tutors where students can get help with their math coursework. No appointments are required to use the Math Center.

Attendance

Students are expected to attend and be on time for all scheduled classes and labs. Students should refer to the course syllabus for individual course attendance requirements. At instructors' discretion, students may make up work missed. When students must be absent, it is vital that they remain in contact with their instructors.

Any student who has not attended at least one face-to-face class meeting or completed one assignment/activity for an online class by the date in which 10% of the class has passed will be reported by the instructor as "never attended." A student who has never attended a class by the 10% date is no longer enrolled in the class.

Under extenuating circumstances, a student who has never attended by the 10% date may petition for reinstatement in the class and earn course credit. The student should notify the instructor, in writing, of the extenuating circumstances prior to the 10% percent

date of the class and provide compelling documentation to support the request for reinstatement. Reinstatement will only be considered by the instructor when the absences were due to unforeseeable and uncontrollable circumstances. An instructor's decision regarding reinstatement may be appealed to the appropriate Dean within two (2) business days. The Dean's decision is final.

Any student who has been absent for 20% or more of the total contact hours prior to the withdrawal date of the course may be administratively withdrawn from the course. A student in an online or hybrid course may be administratively withdrawn following two consecutive weeks in a 16-week term (or one week in shorter academic terms) of missed assignments, missed attendance, and lack of communication with the instructor regarding course participation. Consistent with policies establishing attendance in online courses, logging into a course site but failing to perform the assignments does not constitute attendance. A grade of "WP" will be assigned for any course from which the student is administratively withdrawn.

Administrative withdrawals will be allowed up to the published Administrative Withdrawal deadline each semester (the 80% point of the semester). Thereafter, the earned grade will be posted. Under extenuating circumstances, a student may petition, in writing, the instructor, for reinstatement in the course upon demonstrating the capacity and likelihood of satisfactorily completing requirements as indicated on the course syllabus.

Tuition refunds or credits will not result from an administrative withdrawal.

For more information, consult Policy 5.2.1 - Attendance at alamancecc.edu/policies or the College Catalog.

Key Dates for Spring 2024

Classes Begin for 16-week & 1st 8-week Sessions - January 8

Last Day of Drop/Add - January 11

Martin Luther King Holiday - January 15

Classes Begin for 14-week Sessions - January 23

12-Week Classes Begin - February 5

Last Day to Drop with a WP for First 8-Week Section Courses - February 21

Classes End for 1st 8-week Sessions - March 4

Spring Break - March 5-13

Classes Begin for 2nd 8-week Sessions - March 14

Easter Holiday - March 28-31

Last Day to Drop with a WP for 16-Week Section Courses - April 19

Last Day to Drop with a WP for 14-Week Section Courses - April 22

Last Day to Drop with a WP for 12-Week Section Courses - April 26

Last Day to Drop with a WP for Second 8-Week Section Courses - April 30

Classes End for 16-week and 2nd 8-week Sessions - May 11

Make-Up Work

No make-up test or re-tests will be given. If an emergency arises that will cause you to miss a scheduled test, it is your responsibility to inform your instructor **prior** to the scheduled test time and make alternate testing arrangements with the instructor. Your instructor will decide whether the reason for your absence warrants special consideration or not.

Homework assignments and dates due will be given at least one week in advance of due date. You have until the start of class to turn in the homework. No homework will be taken after the scheduled class starts. If homework assignments are not turned in at due date, then a grade of zero will automatically be assigned to that particular homework assignment.

Pop Quizzes: Instructor may give pop quizzes during the semester. The pop quiz grade will averaged in with test grades.

Course Calendar

AHR-115-01-2023FA		Bently Pagura Course Calendar	<i>Course Assignments subject to change instructors discretion</i>
Dates	Chapters/Units	Description	Due Date
Week 1	HW Unit 45	Intro to Refrigeration Systems, Refrigerator Lab	8/24/2023
Week 2	HW Unit 21 & 22	Refrigerator Components	8/31/2023
Week 3	HW Unit 23 & 24	Refrigerator Wiring and Electrical	9/7/2023
Week 4	HW Unit 25	Special Refrigeration Systems	9/14/2023
Week 5	HW Unit 26	Refrigeration Controls	9/21/2023
Week 6	HW Unit 27 & 28	Basic Symbols	9/28/2023
Week 7	HW Unit 29 Resume	Electric Motors	10/5/2023
		Fall Break	10/10-10/11/2023
Week 8	HW Chapter 17	Freezer Technology	10/19/2023
Week 9	Test Unit 45	Freezer Components	
Week 10	Test Unit 21 & 22	Pump Down Technology	
Week 11	Test Unit 23 & 24		
Week 12	Test Unit 25 & 26		
Week 13	Test Unit 17 & 28		
	Faculty Workday	Thanksgiving Break	11/20 to 11/16/2023
Week 14	Test Unit 29		
All Simulations Due by November 29 (21 Sims or at least 1.5 per week)			
Week 15	Test Chapter 17		
Week 16		Final Exam	12/14/2023 @ 8:00 PM
All assignments are open first day, but close upon their due date and are completed online.			
HW = Homework			

Classroom Conduct and Participation

Behavior: At all times the instructor will keep control of the class /lab. If at anytime the instructor feels that any student is disrupting the class/lab student will be asked to leave within the next two minutes. (Failure to leave within 2 minutes will result in security being involved) Student will not be allowed in that class/lab for the remaining contact hours for that day.

PLEASE READ THE DISTURBANCE MEMO ON THE SAFETY AND ATTENDANCE SHEET. UNDERSTAND THAT IF YOU VIOLATE ANY ITEMS ON THE SHEET YOU WILL BE ASKED TO LEAVE THE CLASS/LAB AND WILL BE COUNTED ABSENT FOR REMAINDER OF THE CLASS/LAB.

Veteran Services

Alamance Community College is dedicated to serving the men and women, who have served and currently serve, in the armed forces. All students eligible for Military Education benefits, including Spouses and Dependents, are treated with the utmost respect for their sacrifices. Veterans, Guardsmen, and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, disabilities) are welcome and encouraged to communicate these, in advance if possible, to the instructor. Please contact Brian Barringer, Veterans Coordinator, for more information at 336-506-4398 or email bmbarringer477@alamancecc.edu.

Title IX

Alamance Community College is committed to fostering a safe, productive learning environment. Title IX provides that no person in the United States shall, on the basis of gender, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. As part of Title IX protections, sexual misconduct — including harassment, domestic and dating violence, sexual assault, and stalking — is also prohibited on our campus.

ACC encourages anyone experiencing sexual misconduct to talk to someone about what happened, so they can get the support they need and we can respond appropriately. If you wish to speak **confidentially** about an incident of sexual misconduct, please contact one of the following campus resources:

College counselors/advisors

- Jenny Brownell (for CCP students), Main Bldg. 363, 336-506-4237, Jennifer.brownell@alamancecc.edu
- Brian Barringer, 336-506-4398, brian.barringer@alamancecc.edu
- Student Success Center, Room 233, 336-506-4130, disabilityservices@alamancecc.edu

- Crossroad Sexual Assault Response and Resource Center, 336-228-0813

Alamance Community College is legally obligated to investigate reports of sexual misconduct, and therefore it cannot guarantee the confidentiality of a report, but it will consider a request for confidentiality and respect it to the extent possible. If you wish to report sexual misconduct or have questions about campus policies and procedures regarding sexual misconduct, please contact our school's Title IX coordinator, Dr. Carol Disque, Gee Bldg. 126, 336-506-4138, Carol.Disque@alamancecc.edu.

As a member of the faculty, I am also required to report incidents of sexual misconduct and thus cannot guarantee confidentiality. I must provide our Title IX coordinator with relevant details such as the names of those involved in the incident.

Diversity, Equity, and Inclusion

To help support a welcoming environment, Alamance Community College uses Inclusive Practices. Inclusive Practices is a self-assessment where staff and faculty intentionally focus on the student experience to help foster a sense of belonging. The four tenets of Inclusive Practices are below:

- Do you see me?
- Do you hear me?
- Will you treat me fairly?
- Will you protect me?

We are committed to your success because you, Belong here.

For more information on ACC's Office of Diversity, Equity, and Inclusion or for questions, please contact Josefvon Jones at 336-506-4289 or by emailing, jjones827@alamancecc.edu.

Student Support Services

TRiO Student Support Services (SSS)

TRiO Student Support Services (SSS) is a federally funded program granted by the U.S. Department of Education. TRiO services provide opportunities for academic development, assist students with basic college requirements, and motivate students

toward the successful completion of their postsecondary education. The goal of the TRiO SSS program is to increase student retention and graduation rates.

[Learn more about the TRiO program](#)

PACE Success Coaching

The PACE Success Coaches support and inspire students to engage in self-discovery, mitigate barriers, persist from application to completion, and become lifelong learners and global citizens. PACE coaches provide academic support and college and community resources to meet the needs of students.

[Learn more about PACE Success Coaching](#)

ACC Food Pantry

ACC's Food Pantry distributes food to currently enrolled students. Food is free; no income information is required. Students are welcome to pick up a bag of groceries once a week from the Student Success Center, Main 233 or at the Dillingham Campus, Room 108.

[Learn more about the ACC Food Pantry](#)

ACC Public Safety and Alerts

Sign up for ACC alerts to stay connected and informed of emergency and inclement weather notifications and campus closures.

[Learn more about ACC Alerts](#)

Single Stop

Alamance Community College has partnered with Single Stop, a non-profit organization, to provide students with easier access to a wide range of resources and benefits. Students can be

quickly and conveniently screened for resources related to food, housing, earned income and child care tax credits, childcare-related resources, health care resources, and more. For more information, and to find out what resources you may qualify for, please contact Kristen Sutherland, Single Stop coordinator, at 336-506-4039 or at kmsutherland239@alamancecc.edu .

Student Assistance Plan

The Student Assistance Plan offers help by providing free, confidential, short-term counseling and personal consultation. All full-time, part-time, curriculum, continuing education, workforce development and dually enrolled students and *immediate* family members are eligible to use the **Student Assistance Plan** through McLaughlin Young. There is no enrollment required or cost to you.

Appointments may be virtual, telephonic, or face-to-face visits with the SAP. To seek assistance through the SAP, simply call **704-529-1428** or **800-633-3353**. This service is available 24 hours a day, 7 days a week.

Virtual Conferencing

Some courses may use either Zoom or Collaborate to conduct virtual meetings or office hours. Students may need to download the zoom app or set up a free zoom account. Please note that live class and review sessions may be recorded and shared with your classmates who cannot attend.

Online Test Proctoring

Some courses may include the use of proctored exams. ACC uses an online test proctoring tool called Respondus Lockdown and Monitor . If your course uses proctored exams, you must participate in proctoring unless you have an accommodation arranged via the Office of Disability Services that requires otherwise. If you have questions about online test proctoring or Respondus, please contact the Distance Learning Center at 336-506-4115.

Classroom Technology Policy

ZERO TOLLERANCE FOR ELECTRONIC DEVICES IN CLASS/LAB: IF YOU ARE SEEN USING AN ELECTRONIC DEVICE IN THE CLASSROOM WITHOUT INSTRUCTORS PERMISSION 3 POINTS WILL BE DEDUCTED FROM STUDENTS OVERALL FINAL GRADE. WE STRONGLY SUGGEST CUTTING DEVICES OFF OR PUTTING THEM ON SILENT. Your Phone and Laptop is a tool for you to use in class/lab not for your amusement.

Communication Policy

Communication between students and the college will be conducted using ACC's ACCess Email addresses. You are expected to set up your ACCess email account and check it regularly for instructor, advisor and college emails. Course announcements sent through Moodle will go to your access account.

Academic Dishonesty and Plagiarism

Students are expected not to give or receive help during tests, projects, or homework assignments unless authorized by the instructor. Plagiarism is prohibited. Plagiarism is defined as intentionally or unintentionally stealing words or ideas from another person, website, article, book, or any other source (published or unpublished), and passing them off as one's own in a paper, speech, oral report, exam, quiz, project, or other assignment. All borrowed phrases, sentences, and ideas must be attributed to any sources(s) consulted. The instructor directly concerned can address academic dishonesty and plagiarism in his/her course(s) and/or can file charges under the Code. All academic dishonesty cases should be reported to the Vice President for Student Success with a recommendation of whether "charges" or "no charges" should be brought. Sanctions which can be imposed by instructors at their discretion, based on the type of assignment and the content of the instructor's syllabus, may include:

- Having the student repeat the assignment;
- Assigning a lower grade on the assignment;
- Assigning a "zero" on the assignment; or,
- Assigning an "F" in the course.

Other sanctions, as described in Part IV of this Policy, may be assigned as outcomes of adjudication by the Vice President for Student Success or designated student conduct officer

All forms of cheating will be dealt with on an individual basis, which could result in full termination from AHR Program of study.

Honors Statement

Students interested in becoming participants in the honors program should contact John Neathery, Program Coordinator at 336.506.4242 or john.neathery@alamancecc.edu. Please visit www.alamancecc.edu/honors for more information.